

THAT WHICH IS CLAIMED:

- 1) Substantially homogeneous type II-like collagen isolated from one or more species of jellyfish.
- 5 2) The type II-like collagen of claim 1, wherein said species is *Stomolophus meleagris*.
- 3) The type II-like collagen of claim 2, wherein said jellyfish comprise one or more elements selected from the group consisting of the umbrella, arms, and the whole organism.
- 10 4) The type II-like collagen of claim 1, wherein said collagen comprises at least 90 wt % of collagen-protein.
- 5) The type II-like collagen of claim 1, wherein said collagen comprises at least 95 wt % of collagen-protein.
- 15 6) The type II-like collagen of claim 1, wherein said collagen comprises at least 99 wt % of collagen-protein.
- 7) The type II-like collagen of claim 1, produced by the process comprising:
- a) extracting collagen from one or more jellyfish species to form a solubilized collagen solution;
- b) salt fractionating said collagen by precipitating a fraction of said
20 collagen from said solubilized collagen solution at a pH between 7.0 and 8.0 by sequentially increasing the molarity of said salt to 1.8 M, 2.5 M, 3.0 M, 3.5 M, 4.0, and 4.5 M and removing said precipitated collagen fraction after each sequential increase; and
- c) collecting the collagen fraction precipitated at 3.5 M salt.
- 25 8) The type II-like collagen of claim 7, wherein said salt solution comprises one or more alkali metal halides.

9) The type II-like collagen of claim 7, wherein said salt solution comprises NaCl.

10) The type II-like collagen of claim 7, wherein said salt fractionating is carried out at a pH of 7.5.

5 11) Type II-like collagen, produced by the process comprising:

a) extracting collagen from *Stomolophus meleagris* to form a solubilized collagen solution;

b) salt fractionating said collagen by precipitating a fraction of said collagen from said solubilized collagen solution at pH between 7.5 by sequentially
10 increasing the molarity of said salt to 1.8 M, 2.5 M, 3.0 M, 3.5 M, 4.0 M, and 4.5 M and removing said precipitated collagen fraction after each sequential increase; and

c) collecting the collagen fraction precipitated at 3.5 M salt.

12) A method of treating arthritis in a subject in need thereof, said method comprising administering a therapeutically effective amount of a jellyfish type II-like
15 collagen to said subject.

13) The method of claim 12, wherein the arthritis is rheumatoid arthritis.

14) A method for modulating an autoimmune response in a mammal comprising administering a therapeutically effective amount of a jellyfish type II-like collagen to said mammal.

20 15) A pharmaceutical composition comprising type II-like collagen and a pharmaceutically acceptable carrier.

16) A composition that comprises type II-like collagen that is substantially free of natural contaminants.